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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,448

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Johann Seitz

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EXAMINER

KITOV, ZEEV V

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,448	Applicant(s) SEITZ, JOHANN	
	Examiner ZEEV KITOV	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 11, 13 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 11, 13 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner acknowledges a submission of the amendment and arguments filed on August 7, 2008. Claims 2 and 12 are deleted. Claims 1, 8 - 11, 15 and 18 - 20 are amended. A new Office Action follows.

Objection

Claim 1 is objected to due to an antecedent problem in a following limitation: "the second protective element is designed to provide overload protection". "The second protection element was never recited before and therefore has no antecedent basis. For purpose of examination it is assumed that "an integral protection element" of the claim is the same as "a second protection element".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graft (US 5,822,164) in view of Risberg (US 4,054,818). Regarding Claim 1, Graft discloses following: a protective device for a load including a first protective element (4 in Fig. 1) providing motor protection and line protection and an integral second

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protective element, i.e. manual disconnect switch (DS in Fig. 1) inherently protecting a load and a motor at a time of maintenance when according to safety rules, the mains power should be disconnected; the disconnect switch includes a second protective element including a fuse (6 in Fig. 1, col. 2, line 55 - col. 3, line 20) providing short circuit protection. However, the second protective element does not provide a protection to disclose the electronic switching device as claimed. Risberg discloses electrical motor control with a help of inverter, the switching circuit formed of SCR's (17, 18 in Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control circuit of Graft according to teachings of Risberg, i.e. by adding the switching voltage converter circuit based on SCR's according to teachings of Risberg, because such switching converter circuits are widely used in the multiphase AC motor control providing efficient speed control for the motors. In the Graft circuit modified according to teachings of Risberg, the second protective element, i.e. fuse protects the electronic switching element, i.e. voltage converter built with SCR's from over-current conditions.

Regarding Claim 6, Graft discloses the first protective element as an overload relay, i.e. circuit breaker (38 in Fig. 2, col. 3, lines 21 - 44).

Regarding Claim 16, Graft discloses the equivalent first means, i.e. a protective element as an overload relay, i.e. circuit breaker (38 in Fig. 2, col. 3, lines 21 - 44).

Regarding Claim 11, Graft discloses an equivalent first means for providing motor protection and line protection, i.e. the circuit breaker (4 in Fig. 1); and an equivalent integral second means, i.e. manual disconnect switch (DS in Fig. 1) together

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with a fuse inherently protecting a load and a motor; wherein the equivalent second switch means, particularly a fuse (6 in Fig. 1, col. 2, line 55 - col. 3, line 20) providing short circuit protection.

Claims 7, 8, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graft in view of Risberg and current design practice.

As per Claim 7, it requires a trip response of the first protective element, i.e. circuit breaker, being coordinated with the rating of a protected switching device. Examiner takes an Official Notice, that such requirement is a normal part in the rules of protection system design, since otherwise if it is not coordinated, i.e. if the trip threshold is set higher than a maximum current that the switch can withstand, the switching device will be damaged thus defeating a purpose of use of the protection system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set a threshold of the protection device such that it would effectively protect all the elements of the circuit.

As per Claim 17, the same considerations as in Claim 7 rejection are valid with respect to the trip response of the first equivalent means (see Claim 7 rejection above).

Claims 5, 10, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graft in view of Risberg and Scoggin (US 6,853,289). Regarding Claims 5, 10, 15 and 20, Scoggin discloses an auxiliary switch (Q1, Q2, D3, and D4 in Fig. 17) used to signal the status of the fuse (362 in Fig. 16, col. 13 -line 25 - col. 14, line 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the auxiliary switch and indicator to indicate the status of the

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fuse, because it is necessary to attract attention of maintenance personnel to take care of a fault problem when it is necessary.

Claims 3, 4, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graft in view of Risberg and Frank (US 2,324,852). Regarding Claims 3, 4, 13 and 14, Graft discloses the disconnect switch (DS in Fig. 1) containing the fuse in its enclosure. According to Graft (col. 3, lines 5 - 20) by disconnecting the switch (DS in Fig. 1) the fuses are transferrable from their operating position into an idle position. However, it does not disclose that the idle position is a maintenance position. Frank discloses a safety switch (Fig. 1) used with the fuse box (Fig. 10). According to Frank, in this structure the switch handle may be locked against movement out of the open circuit position, while at the same time permitting the covers 38 or 28 to be moved for exposing the interior of the switch for inspection, fuse replacement, or maintenance (page 2, right column, lines 57 - 68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Graft system according to teachings of Frank, i.e. providing a locking mechanism to the fuse box in order to secure safe operation during fuse replacement or maintenance.

Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graft in view of Risberg and Frank. Regarding Claims 9 and 19, Frank discloses a safety switch (Fig. 1) used with the fuse box (Fig. 10). According to Frank, in this structure the switch handle may be locked against movement out of the open circuit

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position, while at the same time permitting the covers 38 or 28 to be moved for exposing the interior of the switch for inspection, fuse replacement, or maintenance (page 2, right column, lines 57 - 68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Graft system according to teachings of Frank, i.e. providing a locking mechanism to the fuse box in order to secure safe operation during fuse replacement or maintenance.

Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graft (US 5,822,164) in view of Risberg and Okamoto (JP 2001-126607). Regarding Claims 8 and 18, Okamoto discloses the mechanical structure of the circuit breaker provided with additional function unit, which is used to generate an alarm signal when the over-current conditions occur. The additional function unit is mounted in an insulated enclosure (5) having the same width as the circuit breaker (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the Graft system by providing an additional switching device according to teachings of Risberg (see Claim 1 rejection above), which by a way of analogy having the same width as the circuit breaker, because as well known in the art, the circuit breakers today are mostly manufactured with standard modular dimensions when all the modules with rare exception have the same dimensions. According to the evidence of Buehler et al. (US 5,223,681) such approach provides following advantages: it makes easier future modifications, allowing small modifications to existing modules to fit customer needs, addition or subtraction of modules to fit the

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customer's needs, taking modules out, inserting modules, modifying them, and having as a result, totally different circuit breaker.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (571) 273-8300 for all communications.

/Z. K./

Examiner, Art Unit 2836

11/18/2008

/Stephen W Jackson/

Primary Examiner, Art Unit 2836